REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 16-19, and 22-40 are presently active in this case, Claims 16, 17 and 36-38 amended, Claims 20 and 21 canceled, and Claims 39-40 added by way of the present amendment.

In the outstanding Official Action, Claims 16-22 and 36-38 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,500,773, to Gaillard et al.

Applicants first wish to thank Examiner Doan for the December 14, 2005 telephone discussion at which time Applicants requested a personal interview. While the discussion touched on the merits of this case, Examiner Doan explained that an interview after final would not be granted in this case because prosecution is closed. Filed herewith is an RCE to reopen prosecution of this case. Thus, Applicants respectfully request that Examiner Doan contact the undersigned to schedule a personal interview before issuing a further Office Action in this case.

Turning now to the merits, in order to expedite issuance of a patent in this case, Applicants have amended Claim 16 to clarify the patentable distinctions of the present invention over the cited references. Specifically, Claim 16 has been amended to recite forming a dual damascene structure for a metal interconnect, the dual damascene structure having a bottom opening extending to a surface of the substrate, and a top opening in communication with and wider than the bottom opening and extending to the layer of TERA material. Also recited is that the layer of TERA material is etched to a width of the top opening and used as at least one of a lithographic structure for the formation of the interconnect structure, a hard mask, an anti-reflective coating, and a chemical mechanical polishing (CMP) stop layer. Thus, Claim 16 has been amended to clarify that the layer of

TERA material is etched to a width of the top opening of a dual damascene structure. Support for this limitation is provided by Applicants' figures as originally filed. Specifically, Applicants' Figure 1d, 2d, 3d, 4d, 5d, and 6g all show a layer of TERA material etched to the width of a trench of a dual damascene structure. Therefore, the amendments to Claim 16 do raise an issue of new matter.

In contrast, the cited reference to Gaillard et al. discloses a method of depositing organosilicate layers that are compatible with integrated circuit fabrication processes. Figures 5a-5e of Gaillard disclose use of the organosilicate layer as part of a dual damascene structure. However, the organosilicate layer 504 is used to define only the via opening 506. That is, the organosilicate layer 504 is only etched to the width of the via opening and never etched to the width of the trench opening 510. Thus, Gaillard does not disclose that a layer of TERA material is etched to a width of the top opening of a damascene structure as now required by Applicants' independent Claim 16. Applicants submit that this feature of the claimed invention allows a trench opening of a dual damascene structure to be etched to more accurate critical dimension than has been previously allowed, which in turn provides larger scale integration. Gaillard's use of an organosilicate to form a via opening simply cannot provide this advantage. Therefore, Applicants' Claim 16 patentably defines over Gaillard.

As Claim 16 patentably defines over Gaillard, Claims 17-19, 22 and 36-40 also patentably define over Gaillard by way of their dependency from Claim 16. Nevertheless, Applicants note that new Claims 39 and 40 provide an additional basis for patentability over Gaillard. Specifically, Applicants' Claim 39 recites that the forming of the dual damascene structure includes first etching the layer of TERA material to the width of the bottom layer, and then etching the layer of TERA material to the width of the top layer. Thus, the TERA layer can be used to form both the via and trench structures of the dual damascene structure. Support for this limitation is provided by Applicants' Figures 1-4. Further, Claim 40 recites

forming another layer of TERA material in the layer of dielectric material and etching the another layer to a width of the bottom opening. Thus, two separate layers of TERA material can be used to provide the via and trench structure of a dual damascene structure. Support for this limitation is provided by Figures 5 and 6 in the application as originally filed. In contrast to Claim 39, Gaillard discloses only etching the organosilicate layer 504 to the width of the via, as noted above. Thus, Gaillard does not meet the limitations of Claim 39. Moreover, Gaillard discloses use of only a single organosilicate layer 504 in the dual damascene structure of Figures 5a-5e. Thus, Gaillard also does not meet the limitations of Claim 40.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application. The present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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